

## **DRAFT MSCA Tribal Consultation Policy**

On May 12, 2004, Governor Granholm signed Executive Directive 2004-5 to carry out commitments from the 2002 Government-to-Government Accord with Michigan's federally-acknowledged Indian tribes. In addition, on October 31, 2019, Governor Whitmer signed Executive Directive 2019-17 on State-Tribal Relations. The Mackinac Straits Corridor Authority (MSCA) was created by 2018 PA 359 within the Michigan Department of Transportation (MDOT). Under 2018 PA 359, the MSCA was required to enter into an agreement or series of agreements for the construction, maintenance, operation, and decommissioning of a utility tunnel if the MSCA found that certain conditions set forth in 2018 PA 359 were met. On December 19, 2018, the MSCA found that those conditions had been met and entered into a Tunnel Agreement with Enbridge Energy, which specified the contractual duties and responsibilities of the Parties. The MSCA exercises its duties through a 3-person Corridor Authority Board. The Corridor Authority Board exercises its duties independently of MDOT and the Mackinac Bridge Authority. Any administrative functions of the MSCA are performed under the direction and supervision of MDOT. This policy ensures that the MSCA operates in accordance with the Governor's Executive Directives 2004-5, 2019-17 and federal law. These directives reaffirm the recognition of and fully supports the government-to-government relationship that exists between the State of Michigan and federally-acknowledged Michigan Indian tribes. Through this policy, the MSCA will pursue a proactive and consistent process in tribal affairs and extends commitments with Michigan's federally-acknowledged Indian tribes to recognize their sovereignty and right of self-governance.

The following policy sections pertaining to the consultation process will adhere to the framework and requirements as set forth in Executive Directive 2019-17, yet remain flexible to meet the particular needs and circumstances of each consultation.

1. MSCA shall appoint an individual (Tribal Affairs Coordinator) to be responsible for authority-wide coordination of Tribal Affairs, operating under the guidance of the MDOT Director and the Chief Administrative Officer. The Tribal Affairs Coordinator shall annually report MSCA interaction with the governments of the federally-acknowledged Indian tribes to the Governor's Advisor on Tribal-State Affairs. Additionally, the Tribal Affairs Coordinator will participate in the annual summit, the annual Tribal-State Forum, and monthly tribal-state conference calls.
2. MSCA shall perform government-to-government consultation with federally-recognized tribes following the steps outlined in Executive Directive 2019-17:
  - Step One – Identification:  
The MSCA will use the following mechanisms to identify activities appropriate for consultation:
    - i. State Initiated Identification
    - ii. Tribal Government Initiated Identification
    - iii. Other Resources
  - Step Two – Notification
  - Step Three – Input

- Step Four – Follow-up

3. The Tribal Affairs Coordinator will be responsible for facilitating the implementation of this Tribal Affairs Policy.

Adopted by the Mackinac Straits Authority Board on \_\_\_\_\_, 2021

# **Line 5 Tunnel Project: Draft Procurement & Contracting Execution Plan**

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**Deliverable #3 - Tunnel Agreement**  
Addendum 24 August, 2021

# Great Lakes Tunnel Project: Draft Procurement and Contracting Execution Plan, Revised as of August 2021

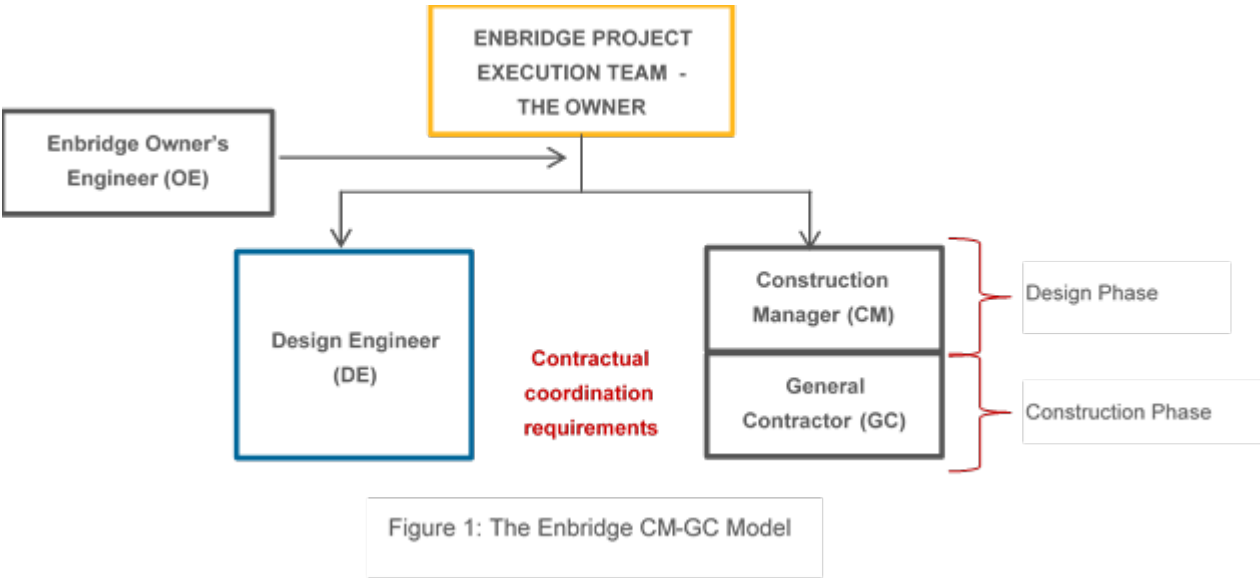
Meeting the key milestones identified in the Tunnel Agreement signed between the Mackinac Straits Corridor Authority (Authority) and Enbridge on December 19, 2018 is a top priority for Enbridge. The information contained in this document is a revision to the Draft Procurement and Contracting Execution Plan provided to the Authority on April 26, 2019 and describes the activities associated with the following deliverables:

- 7.5 Request for Proposals and Contracting Strategy
- (a) Enbridge shall, by **April 30, 2019**, prepare for the Authority’s review a Draft Procurement and Contracting Execution Plan, including, without limitation:
    - (i) The applicable Contract execution model(s) to complete design and construction of the Tunnel;
    - (ii) Enbridge Procurement and Quality processes that include a general description of the RFP and bid solicitation process, contractor qualification process, and contractor proposal evaluation and selection criteria; and
    - (iii) Timeline for the execution of each applicable Request for Proposals (RFP) package.

## Design Process: Phase 1

- Enbridge proceeded with a Construction Manager/General Contractor (CM/GC) commercial model pursuant to which:
- (1) a Design Engineer (DE) designs the Tunnel;
  - (2) an Owner’s Engineer (OE) provides an added measure of assurance that the design, construction, and commissioning of the Tunnel and related facilities align with Enbridge’s specifications and good engineering and operating practices;
  - (3) a Preconstruction Services Contractor provides Enbridge, the DE, and the OE with constructability input during the design phase of the Tunnel;<sup>1</sup> and
  - (4) a CM/GM constructs the Tunnel using the design developed by (1)-(3);

In 2019, Enbridge selected Arup as the DE, WSP as the OE, and Great Lakes Tunnel Constructors as the Preconstruction Services Contractor. Working together, these three parties and Enbridge advanced the design of the Tunnel to a stage where it is now possible to select—and ultimately enter into a Tunnel Construction Agreement with—a CM/GM. The below figure illustrates the CM/GC commercial model:



Phase 1 included a pre-construction services agreement where the pre-construction services contractor provided constructability input throughout the detailed design of the Great Lakes Tunnel Project. The pre-construction services work has concluded. The agreement also provided an option to allow for an off-ramp whereby Enbridge could go back to the market for a competitive bid for Phase 2 (Construction), all parties agreed to use this option. Enbridge will now exercise that option and go back to the market with a request for proposal (RFP) utilizing the design bid build approach for the construction services phase of the project.

<sup>1</sup> While the DE and OE will continue to advise Enbridge through the construction phase, the Preconstruction Services Contractor has completed its work.

## Procurement and Quality Process: Phase 2

Enbridge will issue a request for proposal (Phase 2 RFP) package that includes among other items the most current Issued for Construction Drawings, the Joint Specifications developed with the Authority, and other relevant information necessary for potential construction contractors to prepare a response.

### Construction Contractor Selection Process

To ensure the best qualified firms are hired to construct the Great Lakes Tunnel Project Enbridge conducted an Expression of Interest and Qualifications (EOI). An EOI was sent to multiple worldwide tunneling contractors to solicit their qualifications to demonstrate that they are qualified to perform this challenging project. The Project Team also conducted interviews with the EOI contractors to gain further feedback in addition to their written responses. Enbridge also contacted several of the contractors’ reference projects to verify contractors’ claims and gain insights on their performance. Enbridge enlisted the assistance of the OE and a Tunnel Subject Matter Expert to ensure the qualifications were technically sound and accurate.

The Phase 2 RFP will be issued only to those firms that the EOI process identified as having the requisite qualifications, ability, proficiency, knowledge, and experience with the following:

- Hard rock tunneling;
- Mixed ground tunneling;
- High water pressure tunneling;
- Operation of slurry or variable density Tunnel Boring Machine (TBM);
- Light oil/high pressure natural gas pipeline design and installation within a tunnel;
- Key personnel (including prime or sub-consultants) with experience that closely matches or most similar match to the anticipated conditions for the project; and
- safely executing such work.

### Evaluation Process and Criteria

Evaluation and award of the contract will follow a two-phase process:

#### Phase 1: Submission and Evaluation of Written Proposals

- Interested and qualified applicants will submit a written responses to questions provided by Enbridge, which describe their qualifications and technical experience in executing work of similar type, scale, and complexity of the Great Lakes Tunnel Project.
- Interest and qualified applicants also will submit cost proposal(s) and proposed revisions to contract documents.
- The responses will be ranked based on the answers to the technical questions, the cost proposal, and proposed revisions to contract documents, and a short list of approximately three firms may be determined.
- Evaluation criteria will include the following:

EVALUATION CRITERIA	Examples of information applicant needs to describe to support criteria evaluation
Project Approach	<ul style="list-style-type: none"><li>• Key issues and constraints associated with constructing the proposed facilities.</li><li>• Proposed means and methods for installation of the tunnel and pipeline.</li><li>• A cost proposal/level of effort for the construction services.</li><li>• Overall construction schedule.</li></ul>
Key Project Personnel	<ul style="list-style-type: none"><li>• Proposed staff and their associated roles and responsibilities of all key staff for the construction phase. Resumes for all key individuals and approximate percentage of the time this person will be working on the project.</li></ul>
Project Management Plan/ Approach	<ul style="list-style-type: none"><li>• Overall plan to manage the project, for example, approach to managing costs and schedule during construction; approach to outreach and utilization of subcontractors in the execution of the work; approach to risk management.</li></ul>
Safety Approach	<ul style="list-style-type: none"><li>• Proposed safety program approach and how safety will be managed during construction.</li></ul>

#### Phase 2: In-Person Interview Process

Applicants from Phase I will be invited to participate in interviews where applicants will present and elaborate on their qualifications, experience, and approach to executing the required scope of work, including the four evaluation criteria set forth above.

The below figure illustrates the Design Bid Build commercial model for Phase 2:

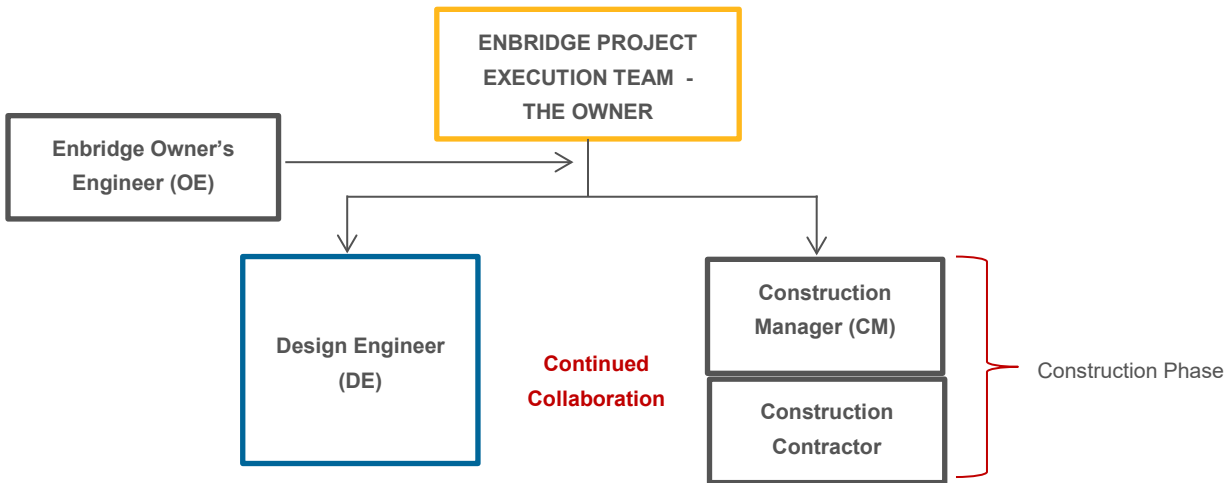


Figure 2: The Enbridge Design Bid Build Model

### Enbridge’s Procurement and Quality Process and Estimated Timeline

The MSCA will review the Phase 2 RFP per the provisions of the Tunnel Agreement. It is anticipated that the MSCA will take any official actions necessary regarding the Phase 2 RPF at its regularly schedule October 2021 meeting. Once, the MSCA has concluded its review, Enbridge will be in a better position to provide a timeline for issuing the Phase 2 RFP and eventually securing a contractor for the construction phase.



Enbridge Energy, Limited Partnership  
7701 France Avenue South  
Suite 600 – Centennial Lakes Park I  
Edina, MN 55435  
U.S.

October 1, 2021

Mackinac Straits Corridor Authority  
C/O Ryan Mitchell  
Innovative Contracting Manager  
Van Wagoner Building  
425 W. Ottawa Street  
P.O. Box 30050  
Lansing, MI 48909

Re: Great Lakes Tunnel Project RFP

Dear Chairman Nystrom and Board Members England and Novak:

Enbridge respectfully submits this letter to provide the Mackinac Straits Corridor Authority (Authority) with the Request for Proposal (RFP) for securing contractor proposals to build the Great Lakes Tunnel Project (Project). We also are providing the Authority with the revised Contract Execution Plan.

Since May 2021, Enbridge has worked with Authority representatives, including its professional staff, Mr. Mike Mooney, Mr. Ryan Mitchell, and Mr. Ray Howd, to complete the development of the RFP and to ensure that it strictly meets the requirements of the Tunnel Agreement.

The RFP contains all information required by Subparagraph 7.5(b) of the Tunnel Agreement, including:

- Qualifications of proposed contractors, which shall include a requirement that the contractor and any proposed subcontractors do not appear on a list, provided by the State of Michigan, of contractors with violations of environmental and safety laws, regulations, rules and permits;
- Preliminary Project Specifications;
- A statement that the Authority and the State are not subject to any financial risks or liabilities;
- Commercial structure;
- Key progress reports and deliverables required from the contractor throughout the duration of the work;
- Change management procedures for proposed modifications of or alternatives to any of the conditions post contract award; and
- A requirement that proposed contractors provide a plan of how they intend to engage Michigan's labor pool in the project, including their means and methods for recruitment, training, and utilization.

The RFP package also includes the revised Jointly Developed Project Specification for the Project.

For your reference, a table is enclosed as Attachment 1, which specifically identifies where, within the RFP, the Tunnel Agreement Section 7.5 (b) requirements have been fully satisfied.

In accordance with Subparagraph 7.5(c), Enbridge will, upon the Authority's request, allow the Authority's designated representative(s) to observe the contractor selection process.



To ensure the Project continues to advance in a timely fashion, Enbridge intends to issue the RFP during the fourth quarter of 2021. We appreciate the Authority's continued work in helping to advance this important infrastructure project.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Guy Krepps'.

Guy Krepps  
Project Director  
Line 5 Tunnel

**Enclosures:** Table Demonstrating Compliance with Section 7.5; Revised Contract Execution Plan; RFP Package, including revised Jointly Developed Project Specifications.

**CC:** Michael Koby - VP US Operations; Lisa Wilson - Associate General Counsel; Peter Holran - Director State Gov Relations; Heidi Bredenholler-Prasad - VP Major Projects



## Attachment 1

Section	Tunnel Agreement Reference	Corresponding section in Tunnel Construction RFP
7.5 (i)	Qualifications of proposed contractors, which shall include a requirement that the contractor and any proposed subcontractors do not appear on a list, provided by the State of Michigan, of contractors with violations of environmental and safety laws, regulations, rules and permits;	<b>Section 13.13 (State of Michigan Requirements)</b> requires the Contractor to represent that neither it nor any of its Subcontractors are restricted or prohibited in any manner from undertaking work for the State of Michigan
7.5 (ii)	Jointly Developed Project Specifications;	Included as <b>Exhibit B</b> to the Construction Agreement
7.5 (iii)	A statement that the Authority and the State are not subject to any financial risks or liabilities;	<b>Section 19.17 (Michigan Liability Waiver and Indemnity)</b> requires that the Contractor waive any claims/losses it may have against the MSCA and the State of Michigan and indemnify each of them from claims/losses.
7.5 (iv)	Commercial structure;	Included as <b>Section 3.18</b> of Construction Agreement
7.5 (v)	Key progress reports and deliverables required from the contractor throughout the duration of the work;	Included as <b>Section 3.18</b> of Construction Agreement
7.5 (vi)	Change management procedures for proposed modifications of or alternatives to any of the conditions post contract award; and	Included as <b>Article VI</b> of Construction Agreement
7.5 (vii)	A requirement that proposed contractors provide a plan of how they intend to engage Michigan's labor pool in the project, including their means and methods for recruitment, training, and utilization.	<b>Section 3.2(j) (Engagement of Michigan Workers)</b> requires that the Contractor shall include in its Work Plans a section on engagement of the Michigan labor pool, including Contractor's means and methods for recruitment, training, and utilization of such workers.
7.8 (a)	Progress of Construction  Enbridge will provide to the Independent Quality Assurance Contractor and any other designated representative(s) of the Authority, timely and reasonable access to all Tunnel construction documents necessary for standard of practice quality assurance. In addition, on a monthly basis, or as otherwise agreed by the parties, Enbridge will provide a progress report of construction progress.	<b>Section 3.8(b)(iii) (Right to Access Records)</b> requires Contractor to provide Company with all data, information, documentation, and records that Company is required to provide to the MSCA and its contractors on timelines designated by Company, including real-time, instantaneous access.
7.8 (b)	Enbridge shall grant to the Independent Quality Assurance Contractor, reasonable access to the construction sites necessary to complete standard of practice quality assurance.	<b>Section 3.9(a)(ii) (Right to Inspect or Observe)</b> requires the Contractor to provide the MSCA and its contractors the right to access, observe, and inspect the Work.  <b>Section 3.19(c) (Tunnel Boring Machine Inspection)</b> requires the Contractor to provide the MSCA and its contractors the right to access, observe, and inspect the Tunnel Boring Machine.
10.1	Requirement to Procure and Maintain Insurance – Enbridge and its contractors performing work under this Agreement will procure and maintain or cause to be procured and maintain insurance policies meeting the requirements of this Section 10 and Schedule 2 Insurance Specifications, collectively "Insurance Requirements." Each required policy will include the Authority and the State of Michigan as additional insureds to the extent commercially available in accordance with customary insurance practice.	<b>Article IX</b> includes MSCA and State of Michigan as additional insureds.

<p>Schedule 2</p>	<p><b><u>SCHEDULE 2 TUNNEL AGREEMENT INSURANCE SPECIFICATIONS</u></b></p> <p>1.1 <b>Required Insurance.</b> At all times during the term of the Tunnel Agreement (the "Term"), Enbridge shall maintain at its own expense, the insurance coverage outlined below, in each case with insurers having financial security ratings at least of "A-" by AM Best or "A" by Standard &amp; Poor's and which are authorized to do business in the State of Michigan.</p> <p>a) <b>Workers' Compensation and/or Occupational Disease</b> coverage that fully complies with all applicable workers' compensation laws or regulations in the State of Michigan. As applicable, coverage shall include an alternate employer's endorsement and voluntary compensation endorsement.</p> <p>b) <b>Employer's Liability</b> coverage with limits of one million dollars (\$1,000,000) each accident, one million dollars (\$1,000,000) disease each employee, and one million dollars (\$1,000,000) disease policy limit.</p> <p>c) <b>As applicable, Commercial Auto Liability</b> covering all vehicles used by Enbridge in connection with the Tunnel Agreement with a combined single limit of five million dollars (\$5,000,000) for injury or death of one or more persons or damage to or destruction of property as a result of each accident.</p> <p>1.2 <b>Construction Insurance.</b> Enbridge shall obtain and maintain the insurance coverage outlined below for construction activities only in each case with insurers having financial security ratings of at least "A-" by AM Best or "A" by Standard &amp; Poor's and which are authorized to do business in the State of Michigan. With the exception of the products and completed operations coverage provided under the construction liability policy (which shall cease in accordance with terms and conditions of the policy), insurance coverages shall cease with commissioning of the Tunnel.</p> <p>a) <b>Construction Liability insurance</b> coverage with a limit to be reasonably determined by Enbridge, but in any case not less than twenty-five million dollars (\$25,000,000) for each occurrence or accident, including property damage, bodily injury (including death at any time resulting therefrom) and personal injuries sustained by any third party because of bodily injury or destruction of property arising from construction activities. Such coverage shall include contractual liability addressing indemnification under this Agreement, cross liability, severability of interests, limited time element pollution and as applicable, shall provide coverage for explosion, collapse, and underground hazards ("XCU"). The policy shall, as determined solely by Enbridge, provide for coverage during the term of construction, and include products and completed operations coverage for a period not less than twelve months following commissioning of the Tunnel.</p> <p>b) <b>Course of Construction insurance</b> with a limit to be reasonably determined by Enbridge, for construction of the Tunnel, which shall provide coverage for all risks of physical loss or damage to the Tunnel or the work being performed in respect thereto, including all machinery, materials and supplies at the site of such work, in transit thereto and intended to become a part of the finished work, or on site awaiting erection or installation, testing or final acceptance by Enbridge. Any losses payable under this policy shall be paid to Enbridge.</p> <p>c) Any other insurance reasonably determined to be necessary by Enbridge.</p>	<p>Enbridge confirms that the minimum insurance requirements set forth in the Tunnel Construction Agreements meet or exceed the minimum insurance requirements set forth in Schedule 2 (Tunnel Agreement Insurance Specifications) of the Tunnel Agreement.</p>
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## Mitchell, Ryan (MDOT)

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**From:** Mitchell, Ryan (MDOT)  
**Sent:** Friday, October 1, 2021 7:08 PM  
**To:** England, Anthony (MDOT-BoardMember); Novak, Paul (MDOT-BoardMember); Nystrom, Michael (EGLE-BoardMember); mikenystrom@thinkmita.org; mmooney67@gmail.com; pnovak@weitzlux.com; england@umich.edu; Howdlaw@outlook.com  
**Subject:** Mitchell, Ryan (MDOT) shared the folder "10-1-2021" with you.



### Mitchell, Ryan (MDOT) shared a folder with you

MSCA Board Members and Staff,

We have recieved the RFP for Construction of the Great Lakes Tunnel Project from Enbridge, which requires MSCA concurrence. I have placed it in this folder and you should now have access. Please let me know if you have any issues with access.

Thank you.

Ryan



10-1-2021



This link only works for the direct recipients of this message.

Open

October 6, 2021

Michael Nystrom, Chairman  
Mackinac Straits Corridor Authority

Re: Review of Enbridge RFP for Tunnel Construction

Dear Chairman Nystrom,

This letter report summarizes my review of Enbridge's draft Request for Proposal (RFP) to construct the Great Lakes Tunnel Project (GLTP) and its compliance with the Tunnel Agreement between the Mackinac Straits Corridor Authority (MSCA) and Enbridge. Below, I provide a summary of the draft RFP contents and its compliance with the Tunnel Agreement. The focus of my review has been on technical content. MSCA Legal Counsel Ray Howd and Michigan Department of Transportation's (MDOT) MSCA Project Manager Ryan Mitchell also participated in the draft RFP review to address legal and commercial requirements of the Tunnel Agreement such as insurance, indemnification, statutory authority, quality processes, etc.

Our RFP review was carried out using a comment-response-resolution process. Read access of draft RFP documents was provided through Enbridge's virtual data room, beginning in May 2021. Conference call meetings were conducted approximately bi-weekly throughout the June to September time frame to facilitate the review process. We provided a number of comments in June requesting clarifications and modifications. A revised RFP addressing our comments was provided by Enbridge in July, also via Enbridge's virtual data room. A second review produced additional comments. Enbridge addressed these comments with an updated draft RFP in August. A third review produced a few additional comments that were addressed in an updated draft RFP in September.

All of my comments, and to my understanding those of Mr. Howd and Mr. Mitchell, were addressed satisfactorily. To this end, I find that the RFP for construction services meets the technical requirements of the Tunnel Agreement as summarized in detail below.

In addition to RFP review, I performed a review of Enbridge's amended Draft Procurement and Contracting Execution Plan. I find this to be satisfactory and in compliance with the Tunnel Agreement and industry tunnel construction practice. I summarize my review of this below. I also reviewed revisions to the jointly-developed Project Specifications submitted by Enbridge. I find these to be acceptable as described below.

My report is divided into the following sections: (1) Amended Draft Procurement and Contracting Execution Plan; (2) Summary of RFP content; (3) RFP compliance with Tunnel Agreement Article 7.5b; (4) RFP alignment with independent quality assurance and tunnel ownership transfer; and (5) proposed changes to the jointly developed Project Specifications.

### **1. Amended Draft Procurement and Contracting Execution Plan**

The Tunnel Agreement (Section 7.5a) requires Enbridge to submit for MSCA review a Draft Procurement and Contracting Execution Plan<sup>1</sup>. Enbridge submitted their Draft Procurement and Contracting Execution Plan on April 30, 2019. Enbridge has recently submitted an amendment to the Draft Procurement and Contracting Execution Plan for MSCA review.

In 2019, Enbridge selected a procurement/project delivery model that included an owner's engineer contract, a design engineer contract and a construction manager-general contractor (CM-GC) preconstruction services contract. Enbridge hired WSP as its owner's engineer, Arup as design engineer and Great Lakes Tunnel Constructors (GLTC) as the pre-construction services contractor (the CM portion). The CM-GC model was followed throughout the design process. I found this delivery model to be appropriate as described in my February 28, 2020 report<sup>2</sup> in large part because it integrated critical aspects of constructibility into the design process.

In the CM-GC delivery model, the tunnel construction contract is generally negotiated with the pre-construction services contractor, who thereafter becomes the general contractor to build the project (the GC portion of CM-GC). There is an option in the CM-GC delivery model that allows the owner (here, Enbridge) or the pre-construction services contractor (here, GLTC) to exit and not move forward with a construction services contract. Both parties agreed to exercise this option. The result is effectively a transition from CM-GC to a design-bid-build procurement/delivery model wherein design has been completed and the bid-build portion remains. Enbridge is therefore submitting to the MSCA a RFP for construction services to build the GLTP.

The design-bid-build contract execution model is identified in the amended Plan, thus meeting Tunnel Agreement 7.5a(i). The amended Plan summarizes Enbridge's contractor selection process as follows:

(a) Enbridge has developed a list of qualified contractors that will be invited to respond to the construction services RFP. The Plan identifies that a qualified contractor must have: ability, proficiency, knowledge and experience with hard rock tunneling, mixed ground tunneling, high water pressure tunneling, operation of slurry or variable density tunnel boring machines, pipeline installation within a tunnel, key personnel with experience that closely matches the anticipated conditions for the project, and can safely execute the work. The Plan indicates that Enbridge, its owners engineer WSP and its consultants have interviewed potential contractors, contacted reference projects of the potential contractors and determined level of qualifications of potential contractors to develop their list of qualified contractors. Qualifications processes like this are common in major tunnel and infrastructure projects. While I have not observed Enbridge's efforts in this regard and I do not know who the qualified contractors are, I did observe a similar qualifications process for CM-GC selection where the pool of applicants is similar. That effort was very comprehensive and reached globally to identify and inform the top global contractors in tunnel construction about the project. The process described in the Plan appears very similar to this.

(b) Enbridge will evaluate both technical and cost proposals submitted by qualified contractors using Enbridge-determined evaluation criteria. Proposal requirements are detailed in the RFP, described below.

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<sup>1</sup> Per the Tunnel Agreement, the Draft Procurement and Contracting Execution Plan (Plan) should include: (a) the contract execution model(s) to complete design and construction of the tunnel; (b) Enbridge procurement and quality processes that includes a general description of the RFP and bid solicitation process, contractor qualification process and contractor proposal evaluation and selection criteria; and (c) a timeline for the execution of each RFP package.

<sup>2</sup> Review of Enbridge Deliverables, Report to the MSCA Board, Feb 28, 2020, 5 p.

Some example evaluation criteria are provided in the Plan, including in categories such as project approach, project personnel, management approach, and safety approach. Enbridge will narrow to a short list of approximately three firms. Enbridge will interview the short list firms, and select a preferred contractor.

The contractor selection approach described in the amended Plan appears similar to best value procurement that is becoming increasingly popular on large and often complex public infrastructure projects. Best value procurement looks at factors other than cost alone when selecting a contractor. While the amended Plan does not provide specific weighting factors that Enbridge will apply to score cost vs. non-cost factors, best value procurement is quite valuable for the GLTP given the complexity, a desire for innovative ideas and the premium placed on contractor experience in projects with similar characteristics and complexity. To this end, I find the amended Plan meets the requirements of Tunnel Agreement 7.5a(ii).

Regarding a timeline for execution of each RFP as required by Tunnel Agreement 7.5a(iii), the Plan conveys that the specific timeline depends on the MSCA Board's approval of the RFP. The Plan indicates that Enbridge will be in a better position to define a timeline after the October board meeting. Enbridge's October 1, 2021 cover letter indicates they intend to issue the RFP during the fourth quarter of 2021.

*Overall, I find the amended Draft Procurement and Contracting Execution Plan to be satisfactory, in accordance with the Tunnel Agreement, and consistent with tunnel construction contracting practice.*

## **2. Summary of Draft Request for Proposal (RFP) to Construct the GLTP**

Enbridge's draft RFP to construct the GLTP is comprised of the following components listed below. In this section, I describe key elements of these components for informational purposes.

- Instruction to Proponents, including RFP Data Sheet
- Appendix A: Proposal Format and Contents
- Appendix B: Proposal Submission Acknowledgement Form
- Appendix C: Technical Requirements Document
- Appendix D: Commercial Requirements Document
- Appendix E: Contract (multiple documents)
- Appendix F: Other Documents

The Instructions to Proponents, including the RFP Data Sheet, introduces the project and RFP, sets forth the components of the RFP, the procedure that proponents must follow, and summarizes the evaluation and selection process. The Instructions establish that the RFP is open to proponents by invite only, and that all RFP documents are considered confidential information. The Instructions establish standard formal procedures for communications about the RFP (via written queries), revisions and clarifications to the RFP, reservation of Enbridge's rights to modify or cancel the RFP, etc. The Instructions establish there will be a pre-proposal meeting and site visit for proponents and proprietary meetings during the RFP period. The RFP schedule is listed as TBD, presumably because schedule is influenced by MSCA approval. Enbridge's October 1, 2021 cover letter submittal indicates they intend to issue the RFP during the fourth quarter of 2021.

The RFP Data Sheet provides a summary of key elements including project description, cost structures, alternative technical concepts, bid process including proprietary meetings, proposal submission instructions, interview guidelines, an evaluation and selection statement, a schedule and a list of RFP appendices. The Data Sheet conveys the RFP is for a construction contractor to construct the GLTP including the tunnel, pipeline, and tunnel systems, as well as the north and south shore stations. Construction of third party utility facilities are not included in this RFP. The project description notes the approximate 4 mile length, that it will be bored entirely

underground below the lakebed of the Straits, that a minimum internal diameter of 21 ft has been established, that a structural lining is required, that challenging ground conditions may be encountered including hard rock, weak rock, fractured rock and potentially up to 17 bar groundwater pressure.

The RFP Data Sheet indicates that Enbridge will consider alternative technical concepts (ATCs) that are proposed by proponents. ATCs are concepts that conflict with the final design and/or specifications. Guidelines for submittal of ATCs are provided. ATCs eligible for consideration must provide quality and performance equal to or better than the final design. If an ATC is accepted by Enbridge, the design engineer (Arup) will implement the design portion of the ATC. Arup will remain the engineer of record for permanent work. ATCs not eligible for consideration include those that include water filled tunnel alternatives or those that would require changes to the MSCA – Enbridge Tunnel Agreement or environmental documents including the NPDES permit, EGLE Resource permit or permit documents to USACE or MPSC.

The RFP Data Sheet identifies two possible commercial structures, either a lump sum with allowances agreement or a cost-plus fixed fee with incentive agreement. Proponents are directed to submit cost estimates for each structure. The Data Sheet requests proponents assume a construction start date of Quarter 1, 2024 for the sake of bidding the same time frame. The actual start date is tied to receipt of all necessary permits. The Data Sheet requires the contractor to provide a construction risk register and to participate in risk workshops throughout construction. The Data Sheet indicates that Enbridge will conduct proprietary meetings with each proponent during the bid period and interviews with proponents following proposal submittal.

The RFP Data Sheet states that proposals will be evaluated based on criteria determined by Enbridge. Stated evaluation criteria to be used includes information requested in the Technical Requirements Document and Commercial Requirements Document, as well as the nature and number of contractual, commercial and technical exceptions. The Data Sheet indicates that scoring and weighting of evaluation criteria will be at the discretion of Enbridge. The evaluation criteria, scoring and weighting are not provided in the RFP.

Appendix A: Proposal Format and Contents identifies proponent proposal requirements and submission outline including parts: (1) a proposal submission acknowledgement form, (2) a technical response, (3) a commercial response, and (4) alternative technical concepts. Appendix B: Proposal Submission Acknowledgement is a form requiring proponents to acknowledge and agree to be bound by and comply with the terms and conditions of the RFP. Appendix C: Technical Requirements Document includes an extensive list of questions for and requests for information from each proponent. Approximately 250 questions and requests for information span topics including capabilities, project experience, quality management, innovation, resource and capacity assurance, diversity and local/indigenous group hiring, health and safety, level of service, transition management, product capacity, and company profile. Appendix D: Commercial Requirements Document includes a list of twelve questions and requests for information pertaining to proponent pricing. Appendix F: Other Documents includes six reference information documents that do not form part of the tunnel construction agreement with the contractor. These reference information documents include the Tunnel Agreement, project risk register template, total dissolved solids lab test results, and pipeline commissioning agent scope of work.

Appendix E: Contract contains the vast majority of RFP content, including Tunnel Construction Agreement (TCA) Terms and Conditions (T&Cs) and accompanying Exhibits for the two contracting options - actual cost plus fixed fee with incentive basis and lump sum plus allowance items. The Exhibits to Appendix E include main documents, attachments and addenda for (A) Scope of Work, (B) Specifications, (C) Compensation, and (D) Contract Conformance Forms. Relevant aspects of the Terms and Conditions and Exhibits are described below.

The T&Cs of each TCA include and detail the following key articles:

- Definitions and terminology, including defining the Company (Enbridge), the MSCA Group (MSCA and personnel, contractors, officials of MSCA), the Michigan Group (MSCA, State of Michigan and personnel, contractors, officials of MSCA and State of Michigan), the Tunnel, the Tunnel Complex to include the Tunnel, the south station and north station, Specifications, Final Completion, Warranty Period, etc.
- Contractor responsibilities for scope of work, labor, quality management, risk management, compliance with law, environmental management, record keeping, providing Enbridge and the MSCA the right to inspect and access to records, management of field conditions and the site, and responsibility for materials and equipment.
- Enbridge's responsibilities including payment, authorizations, information.
- Schedule of work including commencement, contractor's schedule, work acceleration, time is of the essence, guarantee of timely completion.
- Change management procedures and allowances.
- Payment to contractors by Enbridge.
- Title, risk of loss, insurance requirements, including the MSCA and the State of Michigan as additional insureds.
- Procedures and certificates for mechanical, tunnel substantial, substantial, and final completion.
- Contractor's representations including good standing in the State of Michigan.
- Warranties and indemnification, including of the MSCA Group and the Michigan Group.
- Dispute resolution and Michigan liability waiver.

I describe a few of these key articles here and those that pertain to Tunnel Agreement requirements in Section 4 below. The T&Cs establish the contractor as solely responsible for all details, control and quality of the constructed project. The contractor is required to develop and implement a quality management plan, including all work of subcontractors, to insure and document that all Project Specifications are met. The T&Cs establish the contractor as solely responsible for management and mitigation of risks associated with construction of the GLTP, including a requirement of a formal risk management plan. The T&Cs establish the contractor must comply with all health and safety requirements, and all environmental policy and provisions, set forth in attachments (discussed below).

The contractual treatment of subsurface risk is particularly important in underground construction projects. The T&Cs establish contractor and Enbridge responsibility for site conditions, and particularly for the subsurface site conditions encountered during construction of the GLTP. The anticipated subsurface conditions are described in the geotechnical baseline report (GBR) that is provided along with the geotechnical data report (GDR), a factual record of collected geotechnical data, in Attachment A-10 Project Specific Documents. The GBR establishes the anticipated (baselined) subsurface conditions. The GLTP GBR includes the following baseline statements:

- Ground stratigraphy, top of rock, groundwater level, and percentage of rock types contractor will encounter during excavation of North Straits Shaft and Mackinaw Station Portal.
- Statistical distribution of rock properties, e.g., density, porosity, unconfined compressive strength, fracture spacing, compressive wave velocity, hydraulic conductivity, the contractor will encounter during excavation of the North Straits Shaft and Mackinaw Station Portal.
- That no karstic voids will be encountered during tunnel excavation.
- That no ground/groundwater contamination will be encountered during excavation of the North Straits Shaft, Mackinaw Station Portal or during tunnel construction.
- That the contractor will not encounter gassy conditions, e.g., methane, hydrogen sulfide.
- That the buried valley will not be encountered during tunnel excavation.



Additional information related to tunnel construction is summarized in the GBR with descriptions, statements and/or data and not with baseline statements. The anticipated ground behavior during tunnel construction, for example, includes descriptions, statements and data regarding abrasivity, clogging potential, dispersion potential, squeezing potential, and anticipated conditions during interventions (stoppages to inspect/replace cutterhead tools). Minimum face support pressures required for face stability during tunnel boring machine (TBM) advance and during interventions, as well as distributions of rock strength across the tunnel face are provided for six reaches along the tunnel alignment. Estimates of groundwater inflow during free air and hyperbaric interventions along the alignment are provided.

The T&Cs define a differing site condition (DSC) as a site condition that is more adverse to the contractor than the established baseline statement or description/statement/data in the case where there is no baseline statement. The T&Cs state that the contractor's baseline budget and schedule are to consider the risk of encountering all site conditions except DSCs. The risk (cost) of encountering site conditions other than those qualifying as a DSC is allocated to the contractor while the risk (cost) of encountering site conditions that qualify as a DSC is allocated to Enbridge, i.e., the contractor is entitled to additional compensation. The procedures and criteria for establishing a DSC are described in the T&Cs. The T&Cs also include required procedures in the event of archaeological discoveries or discovery of a hazardous substance, including temporary work stoppage.

The T&Cs establish progress reporting and consultation requirements including real-time access to TBM data, daily reports, weekly progress reports, as-built records, etc. The T&Cs also establish Enbridge's and the MSCA's right to inspect and access to project documents. I describe these further in Section 3 below. The T&Cs defines project completion and particularly the requirements for tunnel substantial completion, mechanical completion, substantial completion, and final completion. The T&Cs stipulate a contractor warranty period of 2 years beyond final completion and a requirement that the contractor replace/repair latent defects for 3 years beyond the warranty period. The T&Cs establish an audit period extending to three years after final completion within which contractor must reproduce all records and undertake inspections and audits. The T&Cs establish a dispute resolution process that includes dispute review board (DRB) and mandatory mediation. Project work is to not to be stopped in the event of disputes.

Attachment A-1 Scope of Work (SOW) to each TCA sets forth the Contractor's SOW for construction of the tunnel, tunnel systems, north station shaft, south station portal, pipeline and surface facilities, as well as for commissioning of the pipeline. The SOW defines key terms regarding source and field quality control, inspection and testing, preconstruction testing, product tests, testing agencies, special inspectors, etc. The SOW defines all temporary and permanent construction works, as well as engineering services, required as part of the construction contract. The SOW defines and describes submittal requirements, format, and review process, including a construction execution plan and risk management plan. The SOW includes requirements for the development of tunnel and tunnel systems operations and maintenance manuals, and the documentation of all project records, including as-built drawings. Addendum A-1A Drawings includes a set of issue for construction (IFC) drawings for the project. The IFC drawings include the precast concrete tunnel lining (PCTL) segments, the tunnel sump cover segments, the north station shaft and the south station portal, i.e., the permanent structure that the MSCA will assume ownership of per the Tunnel Agreement.

Attachment A-2 Key Persons establishes replacement liquidated damages for key contractor personnel replacements. Attachment A-3 Contractor's Project Schedule includes instructions to set forth the baseline project schedule, manpower chart and march chart, and defines critical project milestones and dates for the project including mechanical completion, tunnel substantial completion and final completion. Attachment A-4

Safety Documents sets forth health and safety requirements for the project. Attachment A-5 Environmental Documents establishes an environmental protection plan addressing a wide variety of environmental aspects including dewatering and water use during construction, waste management, erosion control, revegetation, etc. Attachment A-6 Government Authorizations and Permits includes the Mackinac Straits Third Agreement and Tunnel Agreement, the EGLE permit, NPDES permit and NPDES basis for decision. Attachment A-9 Policies and Procedures sets various contractor requirements pertaining to socio-economic requirements, quality management, business conduct, materials management, corporate social responsibility, climate policy and operation qualifications. Attachment A-10 Project Specific Documents includes the Geotechnical Baseline Report (GBR) and Geotechnical Data Report (GDR). Attachment A-11 Quality Documents includes a series of documents that articulate construction quality requirements and management, including requirements for the Contractor's quality control plan, inspection and test plan, test and inspection logs and records.

Appendix E Exhibit B Specifications includes Enbridge's standard specifications (Attachment B-1) as well as project-specific specifications (Attachment B-2). Attachment B-2 is extensive (2000 pg) and includes specifications for all aspects of the project. Included in Attachment B-2 are the jointly-developed project specifications – the nine sections of project specifications that pertain to the permanent infrastructure that the MSCA will ultimately own. The jointly-developed project specifications and their development are detailed in my January 28, 2021 report<sup>3</sup>.

Appendix E Exhibit C Compensation establishes contractor compensation by Enbridge, including items that are to be compensated for, compensation methodologies, etc. Appendix E Exhibit D Contract Conformance Forms includes forms for requests for information, change management (e.g., Enbridge change directive, Contractor requested change, change orders), completion certificates (e.g., mechanical, tunnel, substantial, final completion), differing site conditions, significant event notification, and other various items.

### **3. Compliance with Tunnel Agreement Article 7.5b**

Required per Tunnel Agreement Article 7.5b, draft RFPs are to address (i) qualifications of proposed contractors, including a requirement that the contractor and any proposed subcontractors are not in violation of environmental and safety laws, regulations, rules and permits; (ii) jointly developed project specifications; (iii) a statement that both the MSCA and the State of Michigan are not subject to any financial risks or liability; (iv) commercial structure; (v) key progress reports and deliverables required throughout the duration of the work; (vi) change management procedures; and (vii) a requirement that proposed contractors provide a plan for how they intend to engage Michigan's labor pool.

My review of RFP concurrence with 7.5b(i) – (vii) is as follows:

- (i) Qualifications of the proposed contractors, which shall include a requirement that the contractor and any proposed subcontractors do not appear on a list, provided by the State of Michigan, of contractors with violations of environmental and safety laws, regulations, rules and permits.

Regarding technical qualifications, only proponents deemed to be qualified by Enbridge can respond to the RFP. Item 1 of this report summarized the qualifications required of proponents. In addition, Appendix C of the RFP includes numerous questions and requests for information regarding qualifications including experience on projects of similar complexity. Further, TCA Article 13.13 State of Michigan Requirements, states "Contractor represents, warrants, and covenants that neither it nor any of its Subcontractors (whether current or prospective) are restricted or prohibited in any manner from undertaking work for the State of Michigan, including due to violations of environmental and safety laws, regulations, rules and permits." *I find the RFP meets this Tunnel Agreement requirement.*

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<sup>3</sup> Summary of Great Lakes Tunnel Project Activity, Report to the MSCA Board, Jan 28, 2021, 8 p.

(ii) Jointly-developed project specifications:

Appendix E, Exhibit B, Attachment B-2 includes the jointly-developed Project Specifications. *I find the RFP meets this Tunnel Agreement requirement.*

(iii) A statement that the MSCA and the State of Michigan are not subject to any financial risks or liabilities:

TCA Article 19.17 Michigan Liability Waiver and Indemnity states, “Contractor hereby: (a) waives any and all claims/losses it may have against Michigan Group; and (b) shall indemnify each of Michigan Group from any and all claims/losses.” *In consultation with Legal Counsel Ray Howd, he finds this item meets the Tunnel Agreement requirement.*

(iv) Commercial structure:

The RFP identifies two possible commercial structures, a lump sum with allowances agreement or a cost-plus fixed fee with incentive agreement. Proponents are directed to submit cost estimates for each structure. The RFP includes instructions and forms for proponents to provide cost estimates for each. The TCA includes a number of articles with extensive clauses regarding commercial structure. *I find the RFP meets this Tunnel Agreement requirement.*

(v) Key progress reports/deliverables:

The RFP includes numerous requirements for contractor deliverables and reports. For example, the scope of work and jointly-developed Project Specifications require many action and informational submittals, inspection and testing plan records, and quality management documents. Article II of the TCA includes language on progress reports, and Article X of the TCA identifies five levels of completion from mechanical completion through final completion. Each of these require submittal of a certificate of completion. *I find this meets the Tunnel Agreement requirement.*

(vi) Change management procedures:

Article VI of the TCA defines change management procedures including change directives, change requests, change orders and amendments. Addendum forms for change directives and change requests are provided. It is worth noting that the TCA is between Enbridge and the contractor, and therefore, the change management procedures in the RFP are between Enbridge and the contractor. The Tunnel Agreement Article 7.7 requires MSCA approval of material changes, defined as any substantive departure from the Project Specifications.<sup>4</sup> *I find the RFP meets the Tunnel Agreement requirement for change management between Enbridge and contractor. Enbridge will need to coordinate TCA change management procedures with the MSCA when material changes are involved.*

(vii) A requirement that proposed contractors provide a plan of how they intend to engage Michigan’s labor pool in the project, including their means and methods for recruitment, training, and utilization.

TCA Article 3.2 Labor, clause (j) Engagement of Michigan Workers, states that “contractor shall include in its work plan a section that explains how it and its subcontractors will engage Michigan’s labor pool in the performance of the work. This portion of the Work Plan must specify, among other things,

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<sup>4</sup> Under Tunnel Agreement Article 7.7c states “If Enbridge proposes to make any material change to the final Tunnel Construction Execution Plan, it will provide written notice of the proposed change to the designated representative of the Authority. Enbridge will not implement any such proposed material change unless either: (i) the Authority concurs with the proposed change(s) in writing; or (ii) the Authority fails to respond to Enbridge within 30 days.” Material change is defined as “any substantive departure from the Project Specifications.”

contractor's means and methods for recruitment, training and utilization of such workers." In addition, the RFP requires proponents to submit a Socio-Economic Plan detailing the local and Indigenous businesses they intend to utilize as subcontractors and the work opportunities proponent will make available to local and Indigenous businesses, including estimated value. Education and training Indigenous people with the proponent's organization. Anticipated percentage of total workforce that proponent will direct hire from local and Indigenous communities. *I find the RFP meets this Tunnel Agreement requirement.*

#### **4. RFP Alignment with Independent Quality Assurance and Ownership Transfer**

I also reviewed the RFP for alignment with the needs of the to-be-hired independent quality assurance (IQA) contractor (Tunnel Agreement Articles 5.3, 7.8), as well as for alignment with substantial completion and ownership transfer (Tunnel Agreement Article 7.11). Regarding insurance requirements, in consultation with Legal Counsel Ray Howd, he finds that the RFP meets the requirements of the Tunnel Agreement (Article 10).

As described in Tunnel Agreement Article 7.8, Enbridge will provide the IQA contractor access to the project sites and to all quality-related project records in order to complete standard of practice quality assurance. The draft RFP includes provisions that require the contractor to provide access as follows:

##### **Access to Records**

Article 3.8 Books and Records of the TCA requires the contractor to maintain project records and establishes Enbridge's right to access records and the MSCA Group's right to access records. The TCA language indicates the contractor will provide all records that Enbridge is required to provide to the MSCA, e.g., for IQA, and will provide records using timelines designated by Enbridge. Additional language in TCA Article 3.8 requires that MSCA records access is to be facilitated between Enbridge and the contractor rather than directly between the contractor and the MSCA.

I find that the Article 3.8 language enables the MSCA to access all items required for IQA and for future ownership, e.g., as-built records, certificates of completion, etc. I note that the TCA is between Enbridge and the contractor. To this end, the language requiring flow of records through Enbridge to the MSCA Group is appropriate as long as all items requested by the MSCA are provided in a timely and complete manner. It will be appropriate for the MSCA to establish an agreement in writing with Enbridge regarding the breadth and timeliness of quality documents required for IQA.

##### **Right to Inspect**

Article 3.9a Right to Inspect or Observe in the TCA establishes both Enbridge's and the MSCA Group's right to access the work for inspection. The article language explicitly indicates that the MSCA group will be given access to both on-site work and off-site work to perform inspection and will have the right to maintain a reasonable presence for inspection. The TCA language allows for the IQA contractor to access both the main project site and also other critical facilities such as the precast concrete tunnel lining segment manufacturing plant that will likely not be on the main Straits project site. Further, I interpret "reasonable presence" as that which is required to perform industry standard IQA.

##### **Ownership Transfer**

Per Tunnel Agreement Article 7.11c, the MSCA will accept the Tunnel and take title thereto if Substantial Completion of Tunnel Construction is achieved, defined as follows per Article 7.11a: (i) completed in accordance with Project Specifications and Enbridge has submitted a Tunnel Completion Report; (ii) Construction of the Tunnel has been inspected for completeness and compliance with Project Specifications; (iii) Tunnel commissioned; (iv) systems installed that are necessary for normal, safe operation; and (v) all permits for

operation of Tunnel have been obtained. Per the Tunnel Agreement, Enbridge is to provide the MSCA with a Tunnel Completion Report that includes a Certificate by Enbridge that the Tunnel has been completed in accordance with the Project Specifications, and any material changes approved in accordance with Subsection 7.7c. Enbridge will also provide the MSCA with a Tunnel Operations and Maintenance Plan for approval by the MSCA.

In my review of the RFP documents, I find that Enbridge has included similar definitions of Tunnel Substantial Completion, Certificate of Substantial Completion and Tunnel Operations and Maintenance Plan. I believe this is a very positive aspect of the RFP in that everyone, including Enbridge, the Contractor, the MSCA and the MSCA's IQA will be aligned towards the goal of completing the tunnel in accordance with the jointly developed Project Specifications and the Tunnel Agreement.

#### **5. Revisions to Jointly-Developed Project Specifications**

Enbridge requested minor revisions to the jointly-developed Project Specifications in May 2021. The vast majority of these revisions are editorial in nature, e.g., formatting, clarification, punctuation, terminology, removing duplications. The remaining revisions include the following:

- The addition of excavation and backfill material specifications for an oil-water separator (Section 31 20 00).
- The addition of specifications for a wastewater tank, and specifications for excavation and associated backfill material for the wastewater tank (Section 31 20 00).
- The removal of ASTM C40/C40M, C42/C42M, and C1697 references (Section 31 74 16).
- The modification from ASTM F3125 to F593 specification to account for stainless steel bolts (Section 31 74 16).
- The removal of ACI 117 and addition of retrofit waterstops specification to be installed in construction joints (Section 03 30 00).

I view all of these as acceptable revisions. MDOT's Chief Bridge Engineer Matt Chynoweth also reviewed the requested revisions and took no exception.

Sincerely,



Michael A. Mooney, PhD, PE

CC: Ryan Mitchell, Manager, Innovative Contracting Unit, MDOT

**Subject** Great Lakes Tunnel Project

**Date** October 1, 2021

**Job No/Ref** 273207

## Edits to Joint Specs

This table summarizes the edits made to the joint specs since the previous review and acceptance by MSCA in their meeting in February 2021.

Specification Section	Clause	Edits Made
033000 - Cast in Place Concrete	General	Minor editorial edits for clarity. Added in 2.6C/2.8C requirements for Retrofit waterstops. Added in requirements for housekeeping concrete pads.
033100 - Structural Concrete Material	General	Minor editorial edits for clarity. Updated definitions for Fly Ash and Silica Fume Added standard for splitting tensile test (ASTM C496)
034100 - Precast Structural Concrete	General	Minor editorial edits for clarity. Updated scope to add in precast concrete pipe supports (were previously steel) and remove precast arches for access tunnel (no longer in scope)
310179 - Sealing Leaks	General	Minor editorial edits for clarity. Updated scope to remove precast arches for access tunnel (no longer in scope)
312000 - Earthwork/Excavation and Backfill	General	Minor editorial edits for clarity. Additions to accommodate backfilling around oil-water separator tank and wastewater tank.
315600 - Diaphragm Walls	General	Minor editorial edits for clarity.
316300 - Bored Piles	General	Minor editorial edits for clarity.
317117 - Backfill Grouting	General	Minor editorial edits for clarity.
317416 - Precast Concrete Tunnel Lining	General	Minor editorial edits for clarity. Increased specification for permanent bolts (now stainless steel). ASTM F593 was added instead of ASTM 3125 as a result of this change. Removal of ASTM C40, ASTM C42 (plus clarification that testing for permeability / carbonation testing is on cylinders, not cores) and ASTM C1697 from the standards list because they were not used in the body of the spec;